SCALABLE SYSTEM AND METHOD FOR RELIABLY SEQUENCING CHANGES IN SIGNALING BITS IN MULTICHANNEL TELECOMMUNICATION LINES TRANSMITTED OVER A NETWORK

ABSTRACT

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Provided is a system and method for reliably processing changes in signaling bits for telecommunication transmitted over a network. The system includes a plurality of framer farms adapted to generate a corresponding plurality of event signals responsive to a corresponding plurality of signaling events. An event manager is adapted to sequence

10   the plurality of event signals. The plurality of framers is adapted to receive a corresponding plurality of digital signals, extract therefrom corresponding signaling data, and generate a corresponding event signal responsive to the signaling data. A signaling queue is adapted to queue the signaling data and a signal register is adapted to read the signaling queue. The event manager includes an event queue adapted to queue the

15   plurality of event signals, a status register adapted to maintain a status of the event queue, and an event register adapted to read the event queue. The event manager further includes a queue depth register adapted to indicate a number of event signals received at the event queue and a maximum queue depth register adapted to indicate a maximum number of event signals capable of being received at the event queue. A partially full

20   register is adapted to indicate a fraction of the maximum number of event signals capable of being received at the event queue. The status register includes a queue full field, an almost full field, an overrun field, and a queue empty field adapted to maintain a status of the event queue.